STRATEGY FOR RESTORING ENGINEERING BASELINES

In Local Flood & Coastal Adaptation Decisions

Practical Implementation Guide for Independent Scrutiny

Independent Research | July 2026

1. Purpose of this Strategy

We now understand the pattern: older technical documents (ICMP, asset condition, hydraulic models) are more specific about infrastructure performance, while newer high-level adaptation / futures documents often de-emphasise that baseline and move more quickly toward multi-pathway or retreat-oriented framing.

This strategy document translates that understanding into a practical, efficient method for getting the engineering baseline laid down properly in any council area — before irreversible decisions are locked in.

It is designed for independent researchers, constructive councillors, and retired / independent civil engineers working with limited unpaid time.

2. Core Principle

Do not invest large amounts of unpaid engineering time until the baseline information has been forced into the public record.

The structural drivers (liability management, funding constraints, national guidance, insurance signals, modelling advances) make high-level documents the path of least resistance for councils. The remedy is systematic pressure for the missing quantitative baseline, not endless critique of the high-level documents themselves.

3. The Efficient Sequence (Any Region)

Follow this sequence in order. Skip steps only when the information already exists in usable form.

Step 1 – Identify the Local Anchor

- Find one constructive councillor who is already engaged or open to the issue.
- Find 1–3 retired or independent civil engineers with local knowledge and credibility.
- Do not try to mobilise large groups at the start. Small, focused teams work best.

Step 2 – Issue the Baseline Information Requests

Use the standard set (adapted from the Engineering Scrutiny Tools pack):

1. Current asset condition ratings, residual life, and deferred maintenance / renewal liability for the stormwater / flood / coastal protection network.
2. Current level of service assessment and known hydraulic bottlenecks.
3. Full comparative lifecycle cost and risk analysis of major protect / upgrade options vs preferred hybrid or retreat pathways.
4. Residual risk mapping under concurrent high tide / high river + design rainfall events (including infrastructure outage scenarios).
5. Independent peer review of the modelling, costs and economic evaluation.
6. Briefings to elected members on market, insurance and rating-base effects of hazard mapping and adaptation proposals.

Issue these via elected members (preferred) or LGOIMA. Document every request and every gap.

Step 3 – Pull and Compare the Old vs New Documents

- Older: ICMP, stormwater master plans, asset management plans, condition assessments, older hydraulic models.
- Newer: Adaptation futures, coastal adaptation plans, Shoreline Management Pathways, flood hazard mapping updates, residual risk reports.
- Produce a short side-by-side gap analysis (what the old documents quantify that the new ones omit or generalise).

Step 4 – Produce the Local Scrutiny Pack

Use the National Engineering Scrutiny Template structure:

- Programme snapshot
- Critical gaps (old vs new)
- Ready-to-use information requests
- Key questions engineers must force
- Practical working method

- One-page checklist

Step 5 – Feed the Local Anchors

- Give the pack + national pattern briefing + tools pack to the local councillor and engineers.
- Let them apply the pressure. The independent researcher stays in the background as the supplier of analysis.
- Offer to expand any section or produce deeper versions once baseline information is obtained.

4. Efficiency Rules for Unpaid Engineers

7. **Protect unpaid time.** Refuse detailed critique until the baseline information packages have been provided or formally refused.
8. **Work small.** 1–3 engineers + 1 councillor is usually enough to start.
9. **Assign themes.** One person owns condition & residual life; one owns residual risk & concurrent events; one owns comparative options & delivery risk.
10. **Document gaps as findings.** A clear record of what was requested and not provided is itself powerful evidence for elected members and the public.
11. **Stay factual.** Frame everything as “the engineering baseline is incomplete” rather than “they are hiding something”. This keeps credibility high and avoids easy dismissal as activist.

5. Framing Guidance (Non-Partisan, High Credibility)

Use this language:

- “We need the quantitative condition and residual life of the existing network before we can properly evaluate residual risk.”
- “A full lifecycle comparison of a serious protect/upgrade option against the preferred pathways is required for robust decision-making.”
- “How much of the current flood risk is driven by infrastructure shortfalls versus climate drivers?”
- “Independent peer review of the technical and economic work is a normal standard for multi-hundred-million or multi-billion programmes.”

Avoid this language (it reduces credibility):

- Conspiracy or coordinated intent claims
- Activist or party-political framing
- Personal attacks on staff or elected members

6. Scaling Without Burning Out

The independent researcher (or small research capacity) does the heavy lifting on document collation and pack production. Local people apply the pressure.

Recommended order of effort:

12. South Dunedin (already deepest – use as the model)
13. Tauranga (active mapping + market sensitivity)
14. Hawke’s Bay (major live spend post-Gabrielle)
15. Thames-Coromandel (active CAPs with retreat options)
16. Hamilton, Northland, Eastern Auckland as capacity allows
17. National Pattern & Drivers briefing used to support all local packs

7. Tools Already Available

Use these existing packs as the starting point for every new region:

- National Engineering Scrutiny Template
- Engineering Scrutiny Tools (Ready-to-Use Information Requests + One-Page Checklist)
- National Pattern & Drivers Analysis
- Regional first-cut packs (South Dunedin deeper pack + Tauranga, Hawke’s Bay, Thames-Coromandel, Hamilton, Northland, Eastern Auckland)
- This Strategy document

8. Success Indicators

You are succeeding when:

- Baseline asset condition and residual life data are formally requested and either provided or refused on the record.

- A comparative protect/upgrade option is demanded and either produced or acknowledged as missing.
- Local retired engineers are using the checklist and information requests without burning large amounts of unpaid time.
- Constructive councillors are citing the gaps in meetings and briefings.
- The paper trail of incomplete baseline analysis is growing and can be used publicly or in oversight processes if needed.

9. Closing

The structural drivers that produce high-level adaptation documents are real and will not disappear. The only reliable counter is disciplined, efficient, independent engineering scrutiny that forces the quantitative baseline and comparative protect options back into the decision process.

This strategy is designed to make that work sustainable, credible and scalable — so that local engineers and councillors can get the engineering baseline laid down with the least wasted effort and the highest chance of influence.

Use the tools. Follow the sequence. Protect unpaid time. Stay factual. Document the gaps.

Prepared by Jared White, Independent Researcher | July 2026
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